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Innovative Strategy for Strengthening Quran Memorization Through Differentiated Learning in Islamic Religious Education and Character Education

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KEYWORDS
Differentiated Teaching in Islamic Education; Al-Quran Memorization Strategies; Research and Development in PAI Learning

ABSTRACT
Islamic Religious Education (PAI) faces challenges in adapting to diverse student learning needs, particularly in Quran memorization. Preliminary surveys indicate that 60% of PAI teachers rely on lecture methods, 80% use PowerPoint media, and 52.4% of students report difficulty memorizing Quran verses due to ineffective strategies. This study addresses the gap between conventional teaching approaches and the need for personalized memorization strategies responsive to students' varied learning styles. Using the Dick and Carey Research and Development (R&D) model, this study develops a differentiated learning product for Quran memorization tailored to visual, auditory, and kinesthetic learning preferences. The research was conducted at SMA Labschool Jakarta, involving PAI teachers and Grade XII students through expert validation, one-to-one trials, small-group trials, and field trials. Feasibility testing yielded a score of 3.56 (very practical), and formative evaluation averaged 3.65 (very practical). Effectiveness testing using a paired-sample t-test showed a significant increase in memorization scores from pre-test (mean = 91.60) to post-test (mean = 95.95) with $p < 0.05$. The differentiated learning approach, which differentiates content, process, and product, successfully accommodated student diversity and improved memorization outcomes. This research contributes an innovative, evidence-based strategy for PAI learning that integrates Quran memorization with differentiated instruction principles, offering practical guidance for teachers to address diverse student needs.

INTRODUCTION

Islamic Religious Education (PAI) is a compulsory subject that students must follow and master, as it serves a vital purpose in shaping moral and spiritual values (Basyuni & Yuliana, 2021). PAI material encourages students to explore and internalize religious teachings while applying them in everyday life (Suryani, 2020; Hidayat & Putri, 2019). Teachers typically employ various learning models and strategies to create meaningful learning experiences (Shihab, 2018; Sutrisno & Prabowo, 2020). Referring to the values of the Quran that address real-life challenges, the researcher is particularly interested in exploring and emphasizing elements of the Quran that are relevant to students' learning (Aminah & Fathoni, 2021). The integration of Quranic values into education has been shown to positively impact students' moral development (Setiawan & Suryani, 2019). Additionally, the Quran's emphasis on justice, responsibility, and empathy offers a profound basis for promoting ethical behavior in educational settings (Rizky & Subhan, 2020). Thus, exploring the Quran's guidance is essential for aligning Islamic Religious Education with the ethical and moral development of students (Adnan & Hassan, 2021).

The phenomenon of students' limited ability to read and write the Quran has become a motivating factor for this research, as it highlights the need for innovative strategies to enhance these skills (Hasanah & Mursyid, 2020). Reading and memorizing the Quran (tahfiz) provide

numerous benefits, not only spiritually but also cognitively (Sukanto & Fadila, 2019). As Islamic Religious Education continues to evolve, various models of tahfiz learning have emerged (Syafii, 2021). In this context, tahfiz refers to a method of memorizing the Quran through continuous reading and repetition, enabling accurate and fluent recitation from memory (Arifin & Dwi, 2020; Hidayah & Sari, 2021). This method has been recognized as an effective way to reinforce memory retention and improve cognitive functions (Wijayanto & Kurniawati, 2020). Tahfiz learning, when combined with modern pedagogical techniques, can further enhance students' ability to internalize Quranic texts (Mawardi & Nasution, 2020). Additionally, recent studies show that integrating technology with tahfiz learning also has a positive impact on students' Quranic memorization (Fathoni & Setiawan, 2021).

To achieve optimal results in Quran memorization, the application of effective and efficient methods is essential, reflecting a Muslim's fundamental competence in understanding Islam comprehensively (Busthomi, 2025; Kurniawan, 2025; Wijaya, 2024). Therefore, dedicated efforts are needed to introduce active, independent, integrative, and sustainable learning methods. Among the most widely used techniques today are Sabaq, Sabqi, and Manzil—collectively known as the SSM method. This method requires disciplined repetition and consistent review to strengthen long-term memorization.

Based on a questionnaire distributed to several religious teachers on January 20, 2024—which explored teaching duration, methods, and media used by PAI educators—60% of respondents reported having over ten years of teaching experience. Among them, 40% predominantly used lecture-based methods, while 80% relied heavily on PowerPoint media. These findings suggest that many PAI teachers still rely on classical approaches supported by presentation-based media.

A student survey regarding their enthusiasm for studying Islamic Religious Education and Ethics revealed that Morality was the most preferred element (42.9%), while the Quranic component received 23.8%. When asked which Quran-related activities were most challenging, 23.8% cited memorization, and 42.9% mentioned understanding the meaning of verses. The primary difficulties were forgetting verses (52.4%) and difficulty concentrating when beginning to memorize (28.6%). Regarding preferred methods, 66.7% found reading and repeating aloud most helpful, while 23.8% preferred listening to audio or murattal recitations.

From these results, the researcher was motivated to apply differentiated learning in Islamic Religious Education, particularly at the high school level. Differentiated learning recognizes that each student possesses unique potential, emphasizing the development of individual interests and talents. Education, therefore, should not only fulfill intellectual needs but also nurture holistic personal growth that enables students to benefit others.

The implementation of differentiated learning begins with careful planning and mapping of students' learning needs. Differentiation instruction is neither individualized in a disorganized manner nor merely the combination of similar tasks; rather, it is a proactive approach emphasizing qualitative differences in learning experiences. Effective differentiated instruction is rooted in ongoing assessment involving conversations with students, classroom discussions, learning reflections, and formal evaluations designed to identify learning paths suited to each individual.

The application of differentiated learning can enhance students' diversity and uniqueness while providing opportunities for them to learn naturally and efficiently. Active

student participation—such as asking questions, expressing opinions, completing tasks, and responding to teachers—is a key indicator of engagement and motivation within the differentiated learning process.

This study formulates three main problems: first, analyzing the needs for developing Islamic Religious Education (PAI) learning, particularly in Quranic elements, to improve students' memorization; second, developing PAI learning through a differentiated learning approach to enhance memorization; and third, evaluating the instruments developed according to selected development stages. The corresponding research objectives are to identify developmental needs in PAI learning linked to Quranic memorization; to develop PAI learning using differentiated learning principles; and to evaluate the learning process based on predetermined development stages. The benefits of this research are threefold: (1) identifying needs, problems, and solutions for developing PAI learning—particularly in Quranic elements—to improve memorization; (2) facilitating the design of PAI learning adapted to students' learning styles; and (3) equipping educators to plan evaluations, reflections, and follow-up actions within differentiated PAI instruction.

METHOD

This research is a type of research and development known as *Research and Development* (R&D). Research and development methods are research methods used to produce a particular product, and test the effectiveness of that product. Research and development in English translates as *research and development* (R&D) is a research method that is widely adopted by the academic world today to design and test the effectiveness of products.

According to Akker (1999), the objectives of special development research in the field of education are differentiated based on development aspects, namely curriculum, technology and media, lessons and instruction, and didactic teacher education. For the *Dick and Carey* development model , it focuses more on the analysis of learning design consisting of 10 steps, so this model is widely used by researchers for learning designers. The steps of the *Dick and Carey* model are as follows:

(1) Analyze the need to identify objectives (instructional goals); (2) analyzing learning (3). Analyze the learner or learners and the learning context. (4) Formulate the purpose of the work demonstration. (5) Develop assessment instruments. (6) Developing learning strategies (7) Developing and selecting teaching materials. (8) Design and carry out formative evaluations. (9) Revise the learning program. (10) Design and develop summative evaluations.

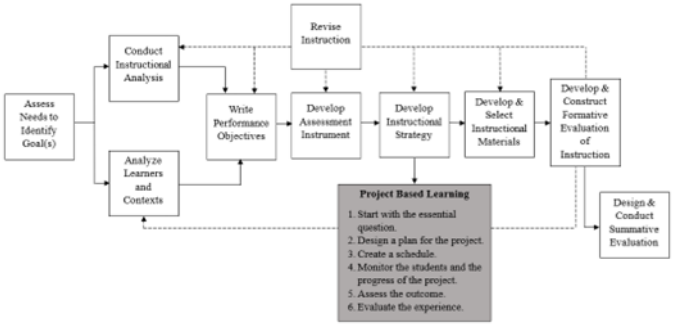

Figure 1. Dick and Carey Instructional Design Model
Source: Dick, W., Carey, L., & Carey, J. O. (2015)

Subject and location of the research

PAI Teacher and Grade XII Student of SMA Labschool Jakarta. The place of implementation of this research is at SMA Labschool Jakarta, which is addressed: Jl. Pemuda No.10, Rawamangun, Kec.

Data collection techniques (observation, interviews, questionnaires, memorization tests)

1. **Expert review**

The following are the steps that developers will take in *the expert review*, including:

a. *Expert review* is carried out by conducting interviews with instructional design experts, and continued with material experts.
b. Interview activities were carried out with experts both face-to-face and virtually. The interview discussed the design of the training program, scenario *project*, and evaluation instruments for the learning program that had been developed.
c. Asking for *feedback* and input suggestions as improvement materials for learning development designs, *project* scenarios, and learning evaluation instruments that have been developed.
d. The developer follows up on *feedback* and input suggestions from experts in the form of revisions and then proceeds to the next stage of development.

2. ***One-to-One* Trial (Learning Objectives)**

This trial was carried out simultaneously with expert review activities. The trial was carried out on three prospective targets of the training program with the following stages:

a. Prepare a differentiated learning development design to be tested along with the training implementation scenario.
b. Selecting three participants from the prospective target of the program who will be the subject of the trial to take part in the trial.
c. Set a schedule and carry out trials on each participant in turn.
d. Collect data in the form of problems and weaknesses found as well as feedback from trial participants. Data collection was conducted using the interview method.
e. Analyze the results of the test obtained to identify problems and weaknesses found for later improvement.

3. **Small *group* trials**

After the expert review and *one-to-one* trial is completed, the next stage is to conduct a *small group trial*. The stages of implementing small group trials are as follows:

a. Selecting eight prospective program targets who will be the subject of trials to use or participate in a differentiated learning development trial in pie to improve memorization directly.
b. Set a schedule and run trials at the same time. Participants carried out the trial by following the scenario of implementing the development of differentiated learning in the pie that had been prepared.
c. Collect data in the form of problems and weaknesses found. Data collection using a questionnaire equipped with comment columns and suggestions on components/aspects of the product that has been developed.
d. Analyze the results of the test obtained to identify problems and weaknesses found for later improvement.

4. Large group trials (*field trials*)

After the *small group* trial is completed, the next stage is to conduct a large group trial *(field trial)*. The stages of implementing large group trials are as follows:

a. Selected 30 participants to use or participate in the differentiation learning development program in the pie directly.
b. Setting schedules and implementing differentiated learning development in the pie. Participants carry out training by following the development scenario of differentiation learning in the pie that has been designed.
c. Directing the trainees to work on the *project* and making a reflective journal as a final learning project that contains experiences and results when working on the *project.*
d. Analyze the final *results of the project* and reflective journals produced by the participants of the differentiation learning development in the pie.

Data analysis techniques (qualitative and quantitative)

1. Feasibility Testing

The next process after conducting an evaluation in this study is to test the feasibility and effectiveness of this study. It is hoped that the product that has been designed can be tested for feasibility so that it can be found out the extent of the effectiveness of the learning development that has been carried out.

A feasibility test is carried out to find out the extent to which the developed learning tools are suitable for use in the learning process. This feasibility test involves several experts, namely: material experts (Islamic Religious Education), learning design experts, media experts and PAI teachers (field practitioners).

The following are the procedures that developers run in the feasibility test:

1. Prepare instruments to assess the design of the material that will be given by students.
2. Explain and discuss with experts both face-to-face, virtual, and *private chat* related to the design of learning programs that aim to improve students' memorization.
3. In accordance with their expertise, experts provide value for the feasibility of products that have been developed using instructional design expert instruments and material expert instruments in the form of value scales.
4. The developer conducts data analysis with data analysis techniques that have been planned to determine the feasibility level of the learning program that is developed and will be used.

2. Product Effectiveness Test

In order to obtain information related to the effectiveness of the products produced, it will be necessary to carry out the next test, namely the effectiveness test. At the effectiveness test stage, the development of learning involves several representatives in each class. The result of this test is the effectiveness of the participants' learning outcomes which is material to analyze the average child's memorization mapping according to their respective learning styles. The following are the procedures that the developers will implement in this effectiveness test:

1. Prepare memorization questions according to learning styles (audio, visual and kinesthetic), along with instruments to assess the final product in memorization
2. Divide students according to their learning style, according to the results of the analysis above, then prepare their future learning plan.

3. Train students to memorize according to their respective learning styles, by adjusting the treatment carried out by the teacher.
4. Provide students with posttests and rubrics according to their respective memorization deposits.

A. Data Analysis Techniques (Effectiveness Test):

1. **Descriptive Analysis:** Calculating the average, standard deviation, min/max values for pre-test and post-test scores of both classes.
2. **Prerequisite Test:** Normality Test (e.g., Shapiro-Wilk) and Homogeneity Test (e.g., Levene's Test) on pre-test and post-test data.
3. **Hypothesis Test (Inferential):**

- **Paired Sample T-Test:** To compare pre-test and post-test scores *in* an experimental class. (Is there a significant improvement after treatment?).
- **Independent Sample T-Test:** To compare *the gain score* (increase: Post-test minus Pre-test) between the experimental class and the control class. (What is the improvement in the experimental class *significantly higher* than the control class?).

RESULT AND DISCUSSION

Model development

The development of Islamic Religious Education learning through a differentiated learning approach on the elements of the Quran serves to improve students' memorization, this research follows the procedure of the *Dick & Carey development model*.

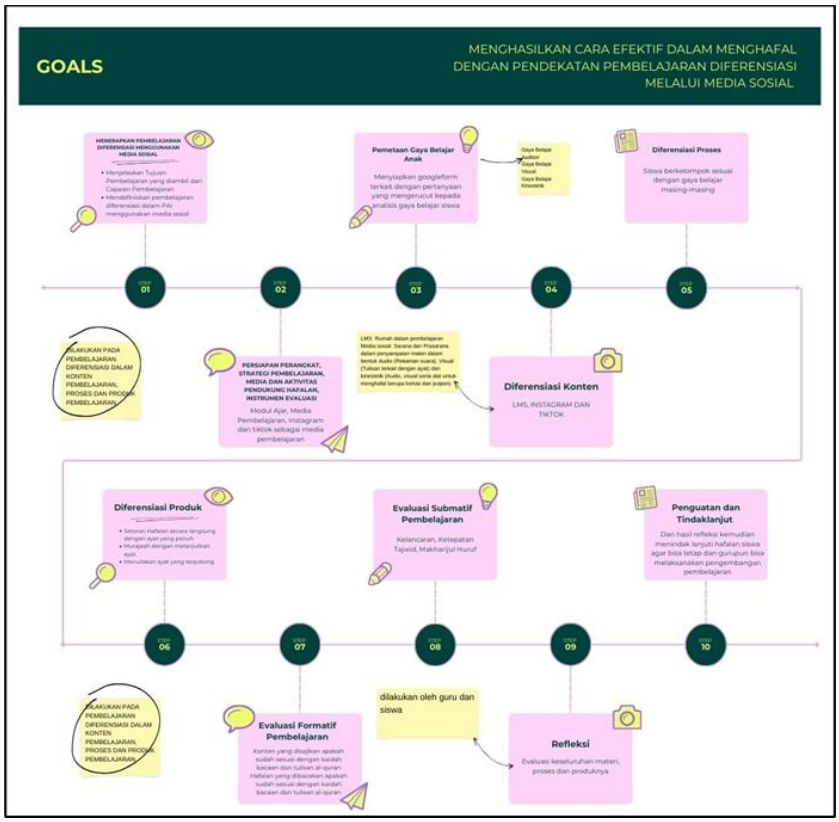

Figure 2. Differentiated Learning Development Model for Quran Memorization

Source: Research design by the author (2025)

Expert validation (materials, media, and learning)

Based on the results of the processing of student response questionnaire data, an average score was obtained on each practicality indicator that showed students' perception of the ease of use, clarity of the material, and the usefulness of the learning product. The results of the evaluation showed that all indicators were in the practical to very practical category**,** with an overall average of 3.56 which was included in the very practical category. These findings indicate that the learning products developed are easy to use and well received by students.

The results of the formative evaluation showed that all indicators were in the "Very Practical" category**,** with an overall average of 3.65**.** These findings indicate that the learning products developed can be used very well by students without causing significant difficulties. The indicator with the highest average score was found in the aspect of suitability of learning methods with student preferences and ease of access to learning media (mean = 3.79). This shows that the application of differentiated learning principles through the choice of audio and video media has succeeded in accommodating the differences in students' learning styles. Students feel comfortable learning according to the way they like, thus increasing engagement in the memorization process.

Limited trials and field trials

The results of this limited student practical test were carried out with 20 students selected in each class, with several conditions, including: fluent reading of the Quran with tajweed rules, having several previous memorizations and enjoying memorization. The results of the formative evaluation showed that all indicators were in the "Very Practical" category**,** with an overall average of 3.65**.** These findings indicate that the learning products developed can be used very well by students without causing significant difficulties. The indicator with the highest average score was found in the aspect of suitability of learning methods with student preferences and ease of access to learning media (mean = 3.79). This shows that the application of differentiated learning principles through the choice of audio and video media has succeeded in accommodating the differences in students' learning styles. Students feel comfortable learning according to the way they like, thus increasing engagement in the memorization process.

Analysis of the effectiveness of increasing Qur'an memorization

Descriptive Analysis

Descriptive analysis was carried out to describe the characteristics of the data from the memorization of the Qur'an of students before and after treatment in the experimental class.

Table 1. Descriptive Statistics of Pre-test and Post-test Scores of Experimental Classes

Statistics	Pre-test	Post-test
N	20	20
Red	91,60	95,95
Standard Deviation	6,82	4,76
Minimum Score	75	80
Maximum Value	100	100

Source: Primary data processed by the author (2025)

Interpretation:

There was an increase in the average score of memorization from **91.60** in the pre-test to **95.95** in the post-test. The decrease in the standard deviation value shows that students' memorization ability becomes **more even** after the implementation of differentiation-based learning.

Prerequisite Test Results

Before the hypothesis test is carried out, the data is tested first to meet the assumptions of **normality** and **homogeneity**.

a. Normality Test

The normality test was performed using **the Shapiro–Wilk Test** because the sample count was < 50.

Table 2. Normality Test Results (Shapiro–Wilk)

Descriptive Statistics Table of Pre-test and Post-test Scores of the experimental class

Variabel	Sig. (p-value)	Remarks
Pre-test	p > 0,05	Normally distributed data
Post-test	p > 0,05	Normally distributed data

Source: Primary data processed by the author (2025)

Results:

Since the significance value > 0.05, the pre-test and post-test data **are normally distributed**.

b. Homogeneity Test

The variance homogeneity test was carried out using **Levene's Test**.

Table 3. Homogeneity Test Results

Data	Sig.(p-value)	Remarks
Pre-test & Post-test	p>0.05	Varians homogen

Source: Primary data processed by the author (2025)

Results: **The** data have a homogeneous variance that makes them eligible for parametric tests.

Hypothesis Test Results

a. Paired Sample T-Test (Experimental Class)

This test aims to find out if there is a **significant difference** between the results of the pre-test and post-test in the experimental class.

Table 4. Paired Sample T-Test Results

Data Pairs	Mean Difference	t	Sig. (p-value)
Pre-test – Post-test	-4,35	$t \neq 0$	$p < 0.05$

Source: Primary data processed by the author (2025)

Result:

The significance value of **$p < 0.05$**, so **H_0 is rejected** and **H_1 is accepted**.

Interpretation:

There was **a significant increase in the results of Qur'an memorization** after the implementation of differentiated learning-based PAI learning in experimental classes.

CONCLUSION

This study uses the Dick and Carey development model, focusing on learning design analysis that includes identifying goals, analyzing learning, analyzing learners and the learning context, formulating performance objectives, developing assessment instruments, developing learning strategies, developing and selecting teaching materials, designing and conducting formative evaluations, revising the learning program, and designing and developing summative evaluations. The feasibility test result was 3.56, which falls into the "very practical" category. The formative evaluation results showed that all indicators were in the "very practical" category, with an overall average of 3.65. There was an increase in the average memorization score from 91.60 in the pre-test to 95.95 in the post-test. The effectiveness of the product is viewed through the differentiated learning approach, which includes learning content in the form of variations of Al-Quran memorization materials adjusted to students' readiness; the learning process, in which the teacher presents material adapted to learning styles (visual, auditory, and kinesthetic); and the learning products produced by both teachers and students.

The learning development described above was implemented through learning media used by the researchers, with Instagram and TikTok serving as the main platforms to support the achievement of the intended learning outcomes and objectives. The trials in this case were conducted by comparing classical classes (using usual methods) with classes applying differentiated learning. The effectiveness was felt not only by the students but also by the teachers themselves.

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